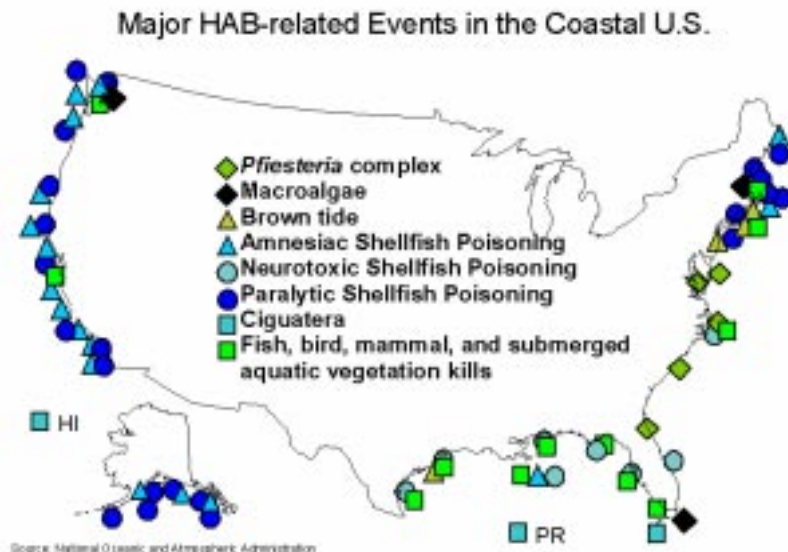


NOAA FY 1999 Budget Request Fact Sheet

Clean Water Initiative

Control of Harmful Algal Blooms

NOAA requests an increase of \$4.8 million to enhance and expand the efforts required to minimize the impacts of Harmful Algal Blooms (HABs) and other algal blooms on coastal waters and public health. These funds will support significant increases in activities related to *Pfiesteria*, other harmful algal blooms, and related water quality issues. The Control of Harmful Algal Blooms is a key component of NOAA's FY 1999 Clean Water Initiative, with the other components being State Partnerships to Reduce Polluted Runoff and the Coastal Resource Coordination program. The Clean Water Initiative is a modest investment to help restore and protect our valuable coastal waters that support billions of dollars of economic activities every year through tourism, recreation and commercial fishing.



NOAA Budget	FY1999 Request \$M
National Ocean Service	
Ocean Resources Conservation & Assessment	
(Coastal Resource Coordination)	1.0
(Control of Harmful Algal Blooms)	9.0 *
Ocean & Coastal Management	
(Reduce Polluted Runoff)	12.0
Total Clean Water Initiative	22.0

* NOAA's FY 1999 budget request includes a total of \$9.8 million for NOAA's National Algal Bloom Science Program to support HAB/*Pfiesteria* research, monitoring, and assessment activities.

The growing problem of algal blooms

Among coastal issues facing the nation today, algal blooms are an expanding problem causing loss of habitat, depleted oxygen (hypoxia/anoxia), and increasingly frequent harmful (toxic and noxious) algal blooms (HABs). Examples include loss of coral reefs in southern Florida, the development and persistence of the large 'dead zone' (low oxygen) in the northern Gulf of Mexico and in 50% of U.S. estuaries, and toxic *Pfiesteria*-like organisms that have recently killed fish and caused human illnesses in Maryland's Chesapeake Bay. Excessive loads of plant nutrients (nitrogen and phosphorus), a key driver for these problems, stands out as one of the

most scientifically complex and difficult coastal issues to manage. The list of affected resources, economies, and habitats affected is growing and, while our ability to approach these problems has increased through recent intra- and interagency efforts, much more remains to be done to address this major national problem.

Responding to the problem

NOAA has taken a lead in the Federal response to this problem by focusing its research, monitoring, and assessment capabilities and its academic partnerships on improving the scientific basis for understanding, predicting, and controlling HAB events. Funds requested through the Clean Water Initiative will enable NOAA to double its support to state monitoring and assessment programs; facilitate expansion of national effort to monitor, understand, and assess the full impact of algal blooms; expand the Ecology and Oceanography of Harmful Algal Blooms (ECOHAB) research and evaluate options for management, control, and mitigation of bloom effects; and accelerate development of HAB cell and toxin detection methods. These efforts include:

- interagency cooperation through the ECOHAB research programs to develop models for predicting the development and impacts of HABs;



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- NOAA state partnerships for improving HAB monitoring and assessment capabilities through training and workshops;
- development of capability to assist states in responding quickly to HAB events
- research on the linkages of coastal eutrophication, HABs, and hypoxia/anoxia to nutrient loads in coastal ecosystems.

Why NOAA?

Within NOAA's National Ocean Service (NOS), a focused multidisciplinary science approach to these algal bloom problems and the accompanying symptoms of coastal degradation has been taken through formation of a National Algal Bloom Program. This program supports research, monitoring, assessment, and the development of technologies to provide decision makers with timely information to respond to HABs and to develop effective control and prevention strategies for all algal-bloom-related problems (e.g. loss of oxygen, degraded water clarity, loss of sea grasses, toxic and noxious blooms). For example, NOS science supports NOAA and state monitoring and assessment efforts for selected HAB and hypoxia problems; workshops, training sessions, and a national clearing house for rapid distribution of *Pfiesteria*-related information; development and testing of new toxin assays for *Pfiesteria* and related organisms; and National leadership in the interagency ECOHAB program designed to develop predictive models for forecasting bloom landfall and toxicity in our coastal waters and in the White House scientific assessment of the causes and consequences of Gulf of Mexico hypoxia. These efforts will also improve the scientific basis for development and implementation of the Coastal Nonpoint Program in partnership with EPA and the states.

For Further Information
Contact:
David Jansen
Office of Legislative Affairs,
(202) 482-4981

